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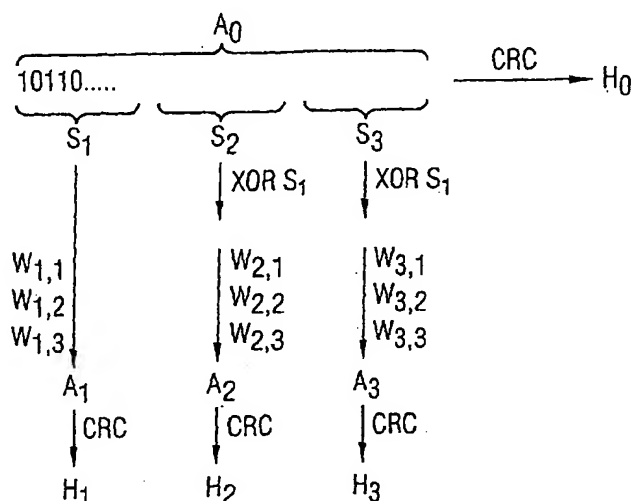
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(54) Title: ASSOCIATING MAC ADDRESSES WITH ADDRESSES IN A LOOK-UP TABLE



(57) **Abstract:** An ethernet switch associates addresses in a look-up table with received MAC addresses using a CRC algorithm, so that correspondence data about each MAC address can be stored in the corresponding section of the look-up table. When, as the look-up table is constructed, a given MAC address  $A_0$  hashes to an address  $H_0$  which is already associated with a previous MAC address, the MAC address is re-hashed using Walsh codes  $W_{1,m}$  to provide a different look-up table address  $H_1$ . This procedure can be performed any number of times  $y$  to generate different addresses  $H_n$  for  $n=1, \dots, y$ . If it is performed sufficiently frequently, then it is likely that an address will be found which is free. In this way, the number of MAC addresses which will typically be associated with a single look-up table address is reduced, preferably to only one.

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